

PMT Calibration @ FNAL (Status Report)

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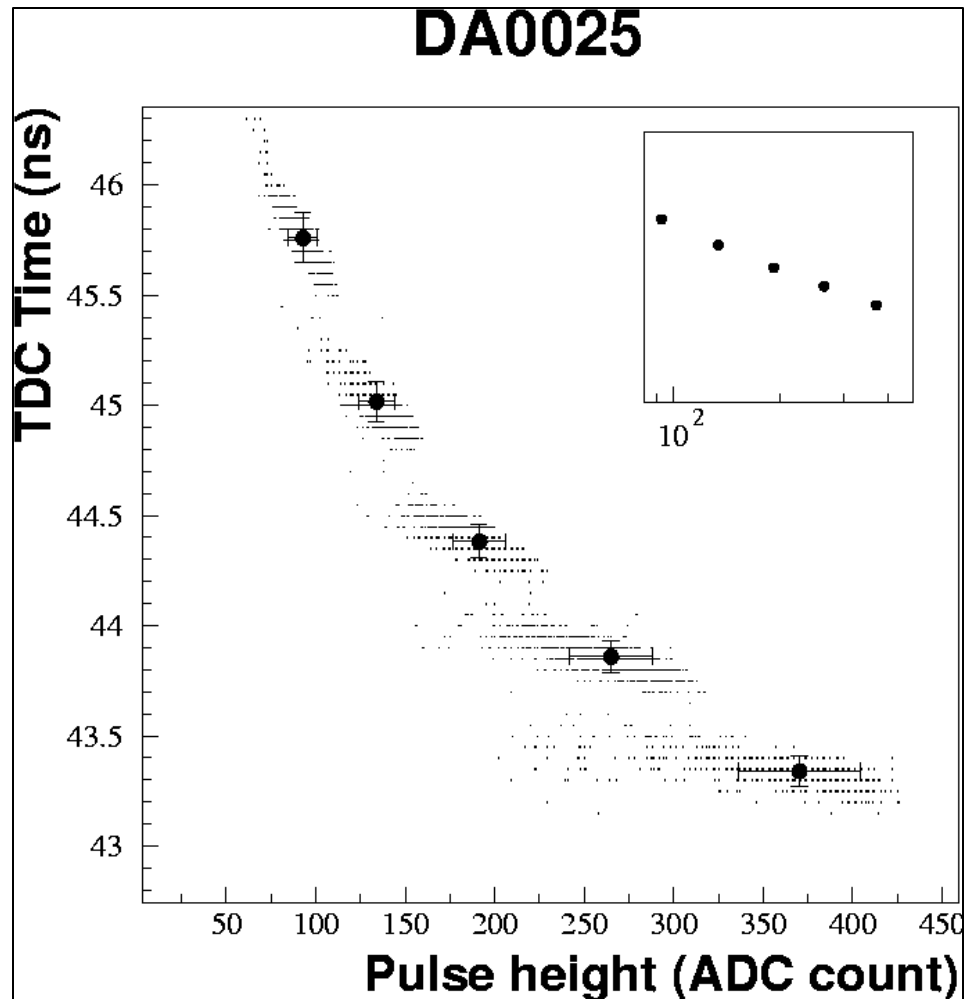
4/27/2000 TOF meeting

- Outline
 - PMT inventory and current calibration status.
 - Timing measurements: Time-Walk correction.

PMT inventory and current calibration status.

- PMT inventory
 - Total number of PMT received 155 + 32 (= 187)
 - Total number of PMT tested 122
 - Total number of PMT analyzed 117
- Testing of long bar is ready. Gerry provided us 1 long bar.
- We have two prototype preamps.
- We keep working on testing PMT at day time,
testing long bar at night.

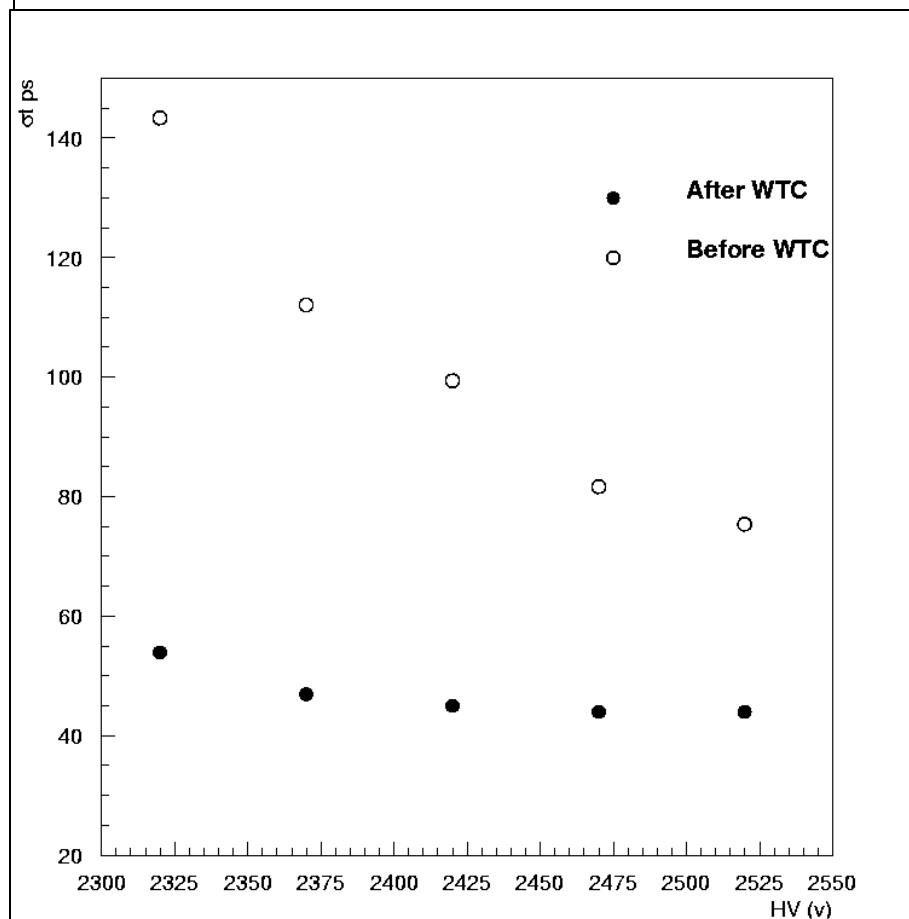
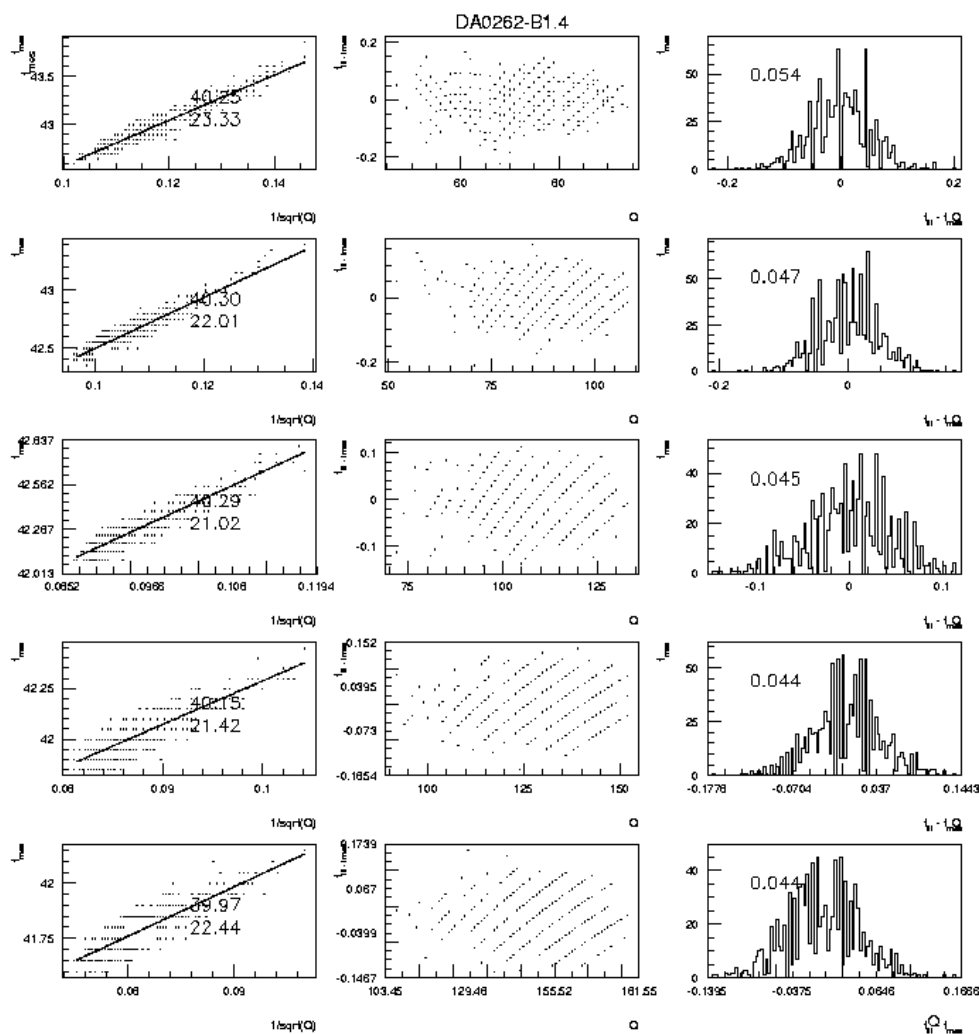
Timing measurements: time-walk correction



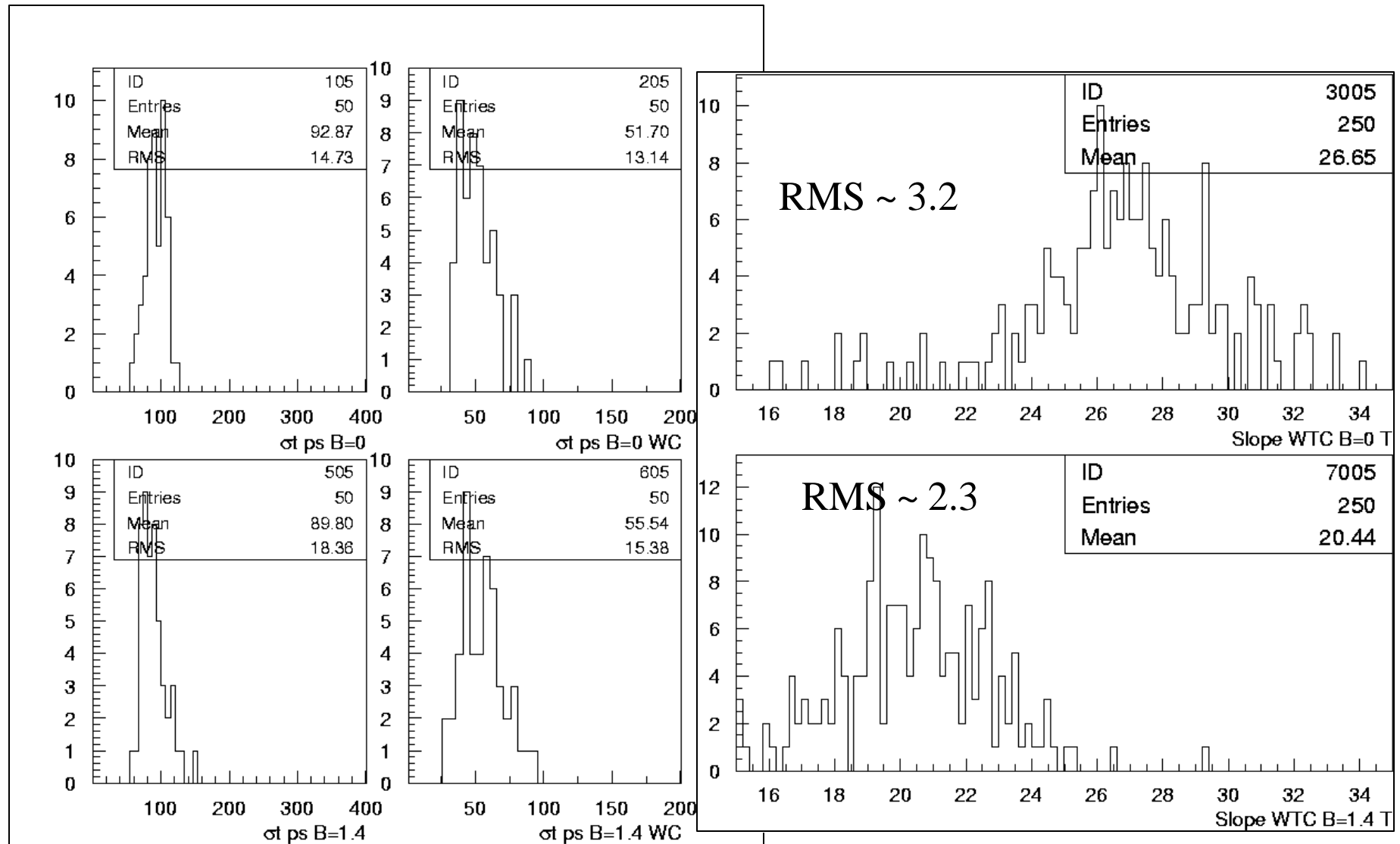
- For each HV point we have fit the time vs. charge curve.
- We have supposed the dependence:

$$\text{Time} \propto 1/\sqrt{\text{ADC}}$$

Timing measurement: walk correction DA0262



Timing measurement: walk correction



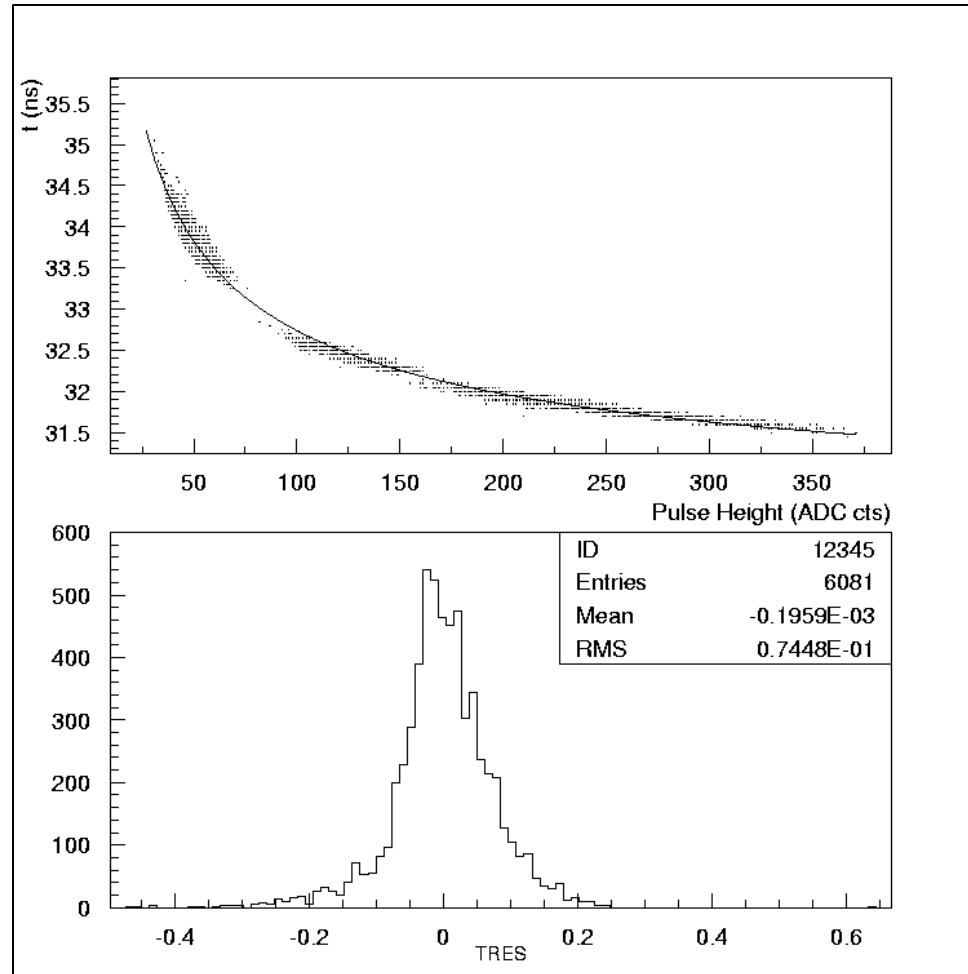
Timing measurement: walk correction (S_T)

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summary_proj_steps
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PostScript printer, but not to
other types of printers.

Timing measurement: walk correction DA0262

- For a given HV~ 2000 Volts. the light output is modified using the neutral density filters.



Timing measurement; walk correction

- Timing between DA0262 and DA0358

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other types of printers.

Directly measured timing ~ 48 ps

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tdc1_tdc2_adc3.eps
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Timing from TDC1 – TDC2 ~ 48 ps